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ABSTRACT

Described is a Social Learning Curriculum (SLC) field test model that focuses on aspects of personnel utilization, communication systems, and the quality of human communication and that highlights the role of the supervisor in the education of the mentally retarded. The four field test model phases discussed are 1) the planning phase (including evaluation requirements and identification of relevant populations), 2) the procedural development phase (including hierarchical communication and involvement, the field test teacher, and developing operation guidelines), 3) the field test initiation phase (including the identification of field sites and the orientation of local personnel), and 4) the field test maintenance and renewal phase (including maintenance functions, materials support, and renewal functions). (DLS)

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FIELD TESTING: A MODEL AND ITS APPLICATIONS

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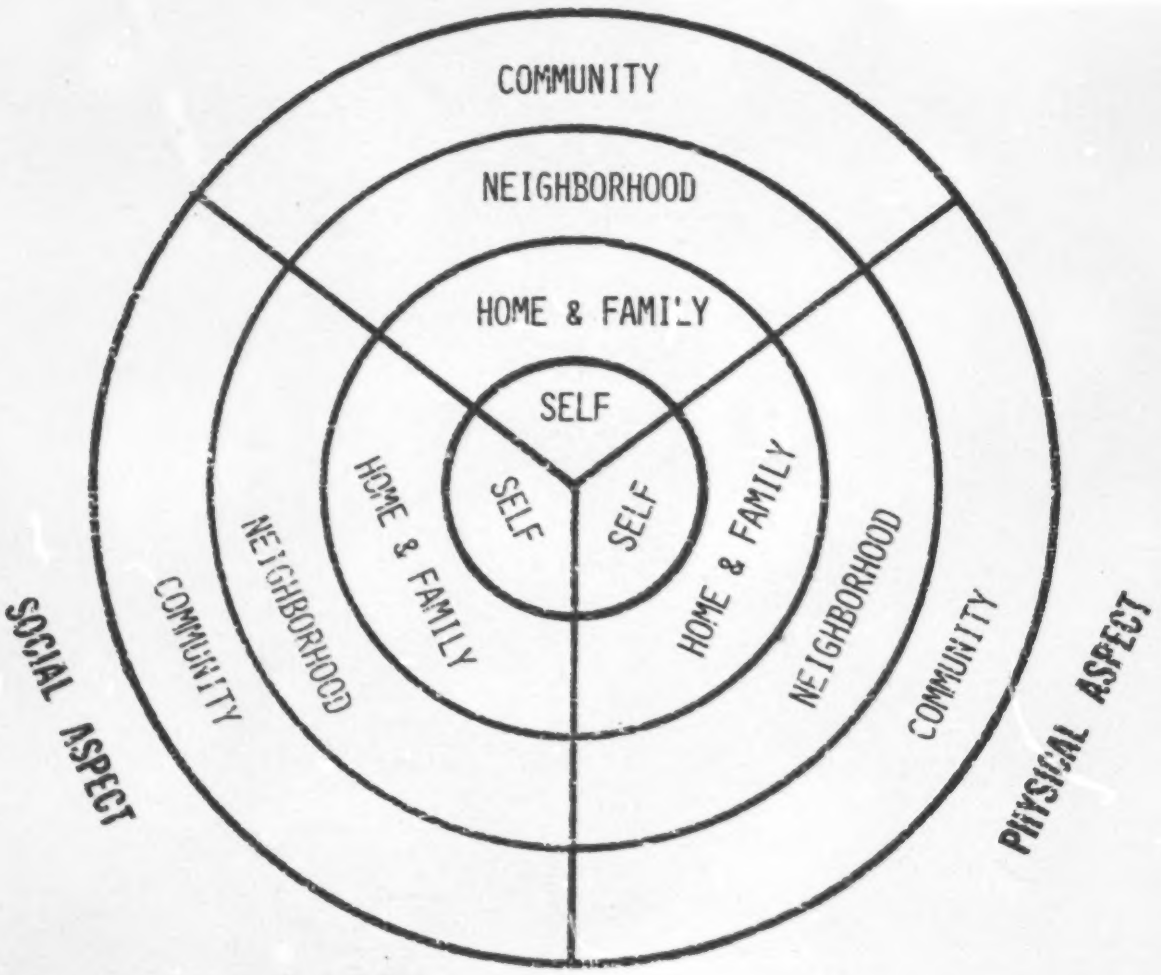

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Social Learning Curriculum

Curriculum Research and Development Center in Mental Retardation
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FIELD TESTING: A MODEL AND ITS APPLICATIONS

INTRODUCTION

The purpose of this paper is to describe a field test model that has evolved experientially over a period of several years. The model focuses on aspects of personnel utilization, communication systems and the quality of human communication. Further, it emphasizes the need to involve professional personnel throughout the educational hierarchy in in field test efforts that are to extend over long periods of time. The model highlights the role of the supervisor as the keystone of field test activities and as a facilitator of educational change efforts.

The Context

In the education of the mentally retarded, many curriculum guides have been available to support teachers' efforts in their classrooms. These guides, however, have proved to be of limited value as instructional tools (Goldstein, H., Mischio, G., and Minskoff, E., 1969). Most often, they are outlines or listings of activities that lack both developmental sequence and specified relationships between activities to meet behavioral objectives. Thus, curriculum guides are open to a variety of interpretations by teachers with the result that there is much inconsistency in both the selection of content and the choice of method by which the content is taught.

Since 1966, the Curriculum Research and Development Center in Mental Retardation has been engaged in the development of the Social

Learning Curriculum (Goldstein, H., 1969; 1974). A central objective in the development of this curriculum was to offer the teacher an alternative to conventional curriculum guides: detailed, developmentally-organized content supported by audiovisual materials. Embedded in the curriculum are the teaching strategies to be used. The selection of content is based on both immediate and long-range objectives of instruction. In the Social Learning Curriculum, the abstract principles of social learning are being translated into content for use in classes for educationally handicapped students. Social learning, as it is used here, refers to the personal and social knowledges, skills and behaviors that are required of an individual if he is to attain an acceptable level of social adaptation, acceptable to himself and to society, at maturity.

The development cycle of the Social Learning Curriculum includes:

(1) initial development of curriculum materials by full-time curriculum developers;

(2) design of evaluation procedures by evaluators in collaboration with curriculum developers;

(3) field testing: the use and evaluation of the curriculum materials by special class teachers in their classrooms; and

(4) revision of the curriculum materials, based on evaluations from field test teachers.

It has often been possible in the development of conventional subject matter curricula for the developers to conduct their own field tests. This has not been the case with social

learning. The development of a curriculum based on the abstract principles that underlie social learning requires that curriculum developers work in relatively undefined areas. Thus, they must devote their full attention to laying the foundations for development and formulating the specific content of social learning. It has been necessary, therefore, to seek alternatives to development-directed field testing.

The need to field test the Social Learning Curriculum derives from several factors. Foremost, the content of the curriculum is sufficiently different from more conventional materials that the character of the material is, itself, a factor to be considered during field testing. Too, relevance, completeness and sequence of content are parts of the formative evaluation of the program. Finally, the manageability of format and the extent to which the format facilitates teachers' use of the materials are likewise factors to be considered during the formative evaluation period. In addition to factors directly related to the evaluation of the curriculum as a teaching document, it is clear that a program concerned with the development of social adaptation concepts and facts requires a broad demographic representation of teacher-evaluators in order to accommodate to differences in sub-cultures, and to be responsive to those differences during the revision period in the curriculum development cycle. The field test process must accommodate all of these evaluation requirements in an economical and

efficient manner.

This paper focuses on the process that has been designed to facilitate the field testing of Social Learning Curriculum materials. A historical perspective is provided to give insights into both the productive and unproductive aspects of the first years of field testing. Following this, the development of a field test model, supported by research, is discussed and some general principles for field test applications to other educational settings are offered.

Field Testing: The First Years

Field testing of the Social Learning Curriculum was begun two years after the Curriculum Center was established. At the start, the task of field coordination was shared among the curriculum developers. Prior to the beginning of the 1968 school year, the developers conducted orientation sessions for prospective field test teachers and their administrators. At that time two conditions of participation were stated: first, that teachers volunteer; and second, that they evaluate each piece of curriculum material that they receive and return their evaluations to the Center. More than four hundred teachers volunteered to participate in field testing during the first year. However, at the end of the year, more than fifty-five percent of the teachers had withdrawn.

From the outset, there were problems in coordinating so large a group of individual teachers, given widespread field test sites in

thirteen states and the lack of consistency in relationships between the Center and field test teachers. It was clear that the development staff could not do justice to their curriculum development efforts and, at the same time, provide the support required by field test teachers.

An analysis of the first year of field testing showed three major areas that required modification if subsequent field test efforts were to be productive. First, there was the need to centralize the responsibility for field coordination within the Curriculum Center so that consistent relationships with field test participants could be maintained. Second, the importance of establishing collaborative relationships with teachers, based on mutually agreed upon commitments and expectations, was recognized. Third, local administrative commitments to field testing and to maintaining a continuing involvement in the field test program were seen as crucial to its future success. As a result, a unit was set up at the Curriculum Center to remedy the deficiencies of the first year of field testing and to develop procedures that would assure viable and durable field test efforts in the future.

Rationale for the Field Operations Unit: Coordination

The field operations unit was established at the Center to provide the interface between the Center's development, research and evaluation staffs and special educators who became part of the field test network. The unit serves as the principal bi-directional

communication channel between the Center and practitioners in the field, and is responsible for the flow of information and materials. Given the Center's need to conduct a broadly-based field test of the Social Learning Curriculum, two alternative patterns of field coordination were possible: (1) field coordination maintained by cadres of Center-based personnel deployed to field test locations; or (2) field coordination managed by Center-based personnel, with the primary responsibility for maintaining field testing vested at the local level.

Ideally, the advantages to using Center-based staff to coordinate field testing were their conversance with both the theoretical and practical applications of the curriculum materials, their ability to communicate this knowledge to teachers, and their usefulness as on-site observers of the outcomes of instruction in the classroom. The data supplied by Center-trained observers could provide a qualitative assessment of instructional outcomes unavailable from the written evaluations supplied by teachers. A major disadvantage to this form of field coordination was that it was not cost-effective, since the geographic spread of field test locations would require a sizeable number of professionals to be engaged in direct service functions. These individuals would duplicate many of the functions of the special education supervisor. Furthermore, it was recognized that by introducing Center staff into existing special education programs, the results of field tests in natural settings might be confounded.

By contrast, using indigenous leadership carries with it many

unknowns. Factors related to the background, training and experience of local special education leadership personnel were among the unknowns that were considered. However, there were several distinct advantages to having locally-based leadership personnel coordinate field test efforts. First, the local leader has an awareness of and a sensitivity to local educational policies and educational goals. Further, this individual would be aware of, and responsive to the subtler aspects of the particular school system's politics; as, for example, the influence of a particular school board member, or the extent to which the local teacher federation is supported by its members. Second, through the involvement of the local administrative and supervisory staffs, the local school system would have a vested interest in, and accept a measure of responsibility for, the success of the field test program. This would likely be true, since professional time and effort were being expended at the local level to facilitate field testing. Third, the local supervisor, as the link between administrators and teachers, would be more accessible to teachers in need of assistance and would, most likely, be less threatening to teachers as a classroom observer than an outsider to the school system would be. The single disadvantage to using this approach was an absence of objective criteria to evaluate the effectiveness of local supervisory support in relation to the objectives of field testing.

On balance, this disadvantage was outweighed by the combination of advantages of using locally-based supervisory personnel. Reliance

was placed on the professionalism and motivation of all participants and on the maintenance of a spirit of collaboration within which field test activities would take place. Support for this view of how people work together most productively is found in research associated with management theory, organization development and human relations (Argyris, 1957; Herzberg, 1966; Likert, 1961, 1967; and McGregor, 1966, for example). Thus the decision was made to utilize local professional staffs to implement field test activities with overall management of the network maintained at the Curriculum Center.

THE SOCIAL LEARNING CURRICULUM FIELD TEST MODEL

Based on the needs of the Curriculum Research and Development Center in Mental Retardation, a field test model has evolved. The model is composed of four distinct, though overlapping, phases: planning, procedural development, field test initiation, and field test maintenance and renewal. These phases are discussed in detail and draw upon the Center's experiences of the past several years for their substantive content.

Planning Phase

The quality of preliminary planning and attention to detail has value far into the future, and is measurable only to the extent that the program, once initiated, is viable for the duration of the field test. Three steps have been identified as parts of the planning phase.

These are: (1) determination of evaluation requirements as dictated by the nature of the materials to be field tested; (2) identification of relevant populations from which sites will be selected for participation in field testing; and (3) examination of practical factors involved in in-situ testing.

Evaluation Requirements

Before preparing to field test, evaluators must first determine the amounts and types of qualitative and quantitative data to be collected. Too, the evaluators play a major role in delimiting the constituency of the field test population, with particular attention given to defining demographic factors pertinent to selection of the field test population. Some of the questions that must be considered by the evaluators follow.

- What is the population for which the materials are pertinent?
- How should the population be distributed demographically?
- What is an optimal size for the field test population?
- On whom or what will data be collected?
- By whom will data be provided?
- What will be the "data demands" placed on each field test participant?

These questions must necessarily be answered before work to establish a field test is undertaken.

Identification of Relevant Populations

Given the scope and nature of the population sought for participation in field testing as determined by the evaluators, it is necessary to verify that such a population does, in fact, exist; and, given its

existence, that it is possible to draw a representative sample from the population. As part of the population search, it is also necessary to determine all possible sources of assistance which may be available in the field to support field test efforts. This includes consideration of professional resources at every level in the educational hierarchy. These resources, once identified, can then be evaluated in relation to the extent to which they might enhance field test efforts.

Practical Factors of In-Situ Testing

Once the population has been defined, it is necessary to examine the relevant factors that might either facilitate or impede the field test. Some of the factors that might be considered include: the organizational structure within which the program operates, specifically the position of the special education program within the general education hierarchy with respect to autonomy in decision making and control of budget; the roles of professionals within the program; the size of the program, specifically the number of professional personnel and the number of students served. Other factors include the demography of prospective sites, in an attempt to insure sufficient generalizeability of the results of the field test. In reviewing the Center's experiences, these factors in combination served as reasonable predictors of the extent to which a school system could be responsive to field test demands.

At this point a curriculum development source must examine its needs in relation to each prospective field site's "local reality." Consideration must be given to such factors as the availability and interest

of the administrative, supervisory and teaching staffs in field test involvement; the amount of time available to be devoted to field testing; the amenability of the group to in-service training workshops; the practicality of providing release time for field test teachers to meet together; and, above all, the concordance between local program objectives and the extent to which they are supported through the curriculum innovation in question.

Procedural Development Phase

Having established the goals of field testing, the role of the field operations unit, and the context within which the program would operate at the local level, it was clear than an organized pattern of activities was needed if the Center's goals for the outcomes of field testing were to be met. This pattern emerged from an analysis of the professional roles of the individuals to be involved in field testing, the tasks which would be required of them, and the communication channels that would be needed to support the use and evaluation of the Social Learning Curriculum.

Hierarchical Communication and Involvement

Theoretically based precedents are available to support the operation of organizations that encompass consideration of tasks, the people who perform them and the communication systems used to facilitate task attainment. Likert's (1961) link pin model, which relies on specified role incumbents within an organization to provide inter- and intra-

group communication, offers support for the way in which the field test network was structured. In essence, Likert's theory relies on overlapping group communication systems at all levels within an organization. Since each organizational level is effectively linked to every other level through consistent communication channels, subordinates may have greater input of their ideas to the organization. Thus, they also have an investment in the extent to which the organization meets its objectives (output). This investment is especially important to consider in organizations where communication moves from its source to those who need the substance of the communication in order to function effectively. Stated another way, "the total organization becomes more integrated through information that goes more directly from where it arises to where it is needed and all levels gain more actual operating power from the increased interaction" (Schmuck and Runkel, 1972, p. 256). For the organization of the field test network, attention was given to perspectives of inter- and intra-group interaction, and to the need to keep the number of individuals through whom information would flow to a minimum.

Information from a variety of sources supports the view that attending to both human needs and task attainment are important if an organization is to function effectively. Further, increased attention to human dynamics within the organization frequently results in improved task attainment (Blake and Mouton, 1964, 1969; Halpin and Croft, 1963; Blumberg and Weber, 1968, for example).

The flexibility of these humanistic approaches to organizational management permits their extension for use in multi-organizational contexts. Thus, the elements of a field test network may be seen as: a curriculum development source (The Curriculum Research and Development Center) linked to a network of many organizations (school systems) through a link pin (the local special education supervisor) for the purpose of maintaining viable communication and action in ways that are satisfying to all members.

The Supervisor as Link Pin

Field testing was designed to complement local special education programming and, as an outgrowth of this, to have the criteria for teacher participation set at the local level. The most important criterion for school district involvement in the field test program was the designation of a local professional, usually a special education supervisor, to serve as the primary support person for teachers involved in field testing. Through the use of already available professional personnel, it was felt that no undue financial burden would be placed on local special education programs. Further, procedures were designed to maximize the amount of overlap with responsibilities typically assumed by a supervisor. In this way work directly connected with field testing would not be perceived by the supervisors as an overload. Finally, the decision to use readily available personnel was made to assure a large measure of generalizeability of the results of field testing to populations other than those directly involved in the Social

Learning Curriculum field test program.

Support for the selection of the special education supervisor as the fulcrum of field test activity may be seen in Lippet's (1967) statement that " . . . innovation in socialization practices requires great emphasis on the amount and type of support which the socialization agent receives during the period of trying out a new practice and consolidating it as part of his internal repertoire of values and skills" (p. 45). The importance of on-site consultative support was recognized as necessary to providing conditions in which the use of the Social Learning Curriculum might be incorporated as part of the teacher's repertoire.

Since the functions associated with providing assistance, in-service training, and making classroom observations are managed differently in different school districts and since titles likewise vary, the designation "field test advisor" was given to those individuals who coordinate field test activities at the local level.

The field test advisor determines, in large measure, the degree of success that his teachers will have as they use and evaluate the Social Learning Curriculum. His major responsibility is to provide substantive assistance to teachers at his site, toward improving their classroom application and evaluation of the curriculum materials that they receive. Assistance may take a variety of forms, including making classroom observations on a regular basis, planning periodic meetings for the teachers so that they have opportunities

to exchange ideas and explore new ones together, and checking the completeness and communicability of ideas expressed by teachers in their curriculum evaluations. Other activities assumed by the field test advisor include distributing and collecting materials provided by the Center, recruiting new teachers and replacing those who withdraw from field testing, and maintaining records that serve as a basis for reporting the progress of the site to the Center. The field test advisor is the formal communications link between the teachers at his site and the Center's field coordinator.

Less easily described, but no less important, is the field test advisor's attitude toward involvement in an experimental program. To the extent that he is enthusiastic and can communicate his enthusiasm to teachers, the results of field testing are greatly enhanced. Enthusiasm, as it is used here, does not imply simply "being sold on the program." Instead, it refers to a willingness to be part of the quest for a "better mousetrap" and to participating in a program that might provide viable alternatives to present programming. Thus, as was said before, the field test advisor does play a significant role in influencing the quality of participation of his teachers.

The Field Test Teacher

The primary data source for gathering information on the utility of the Social Learning Curriculum is the teacher. Teachers evaluate the manageability, relevance, appropriateness, usefulness of the inductive teaching strategy and student motivation in relation to

the materials that they receive. Further, they complete pre- and post-assessments of the students' knowledge of the content of the materials. In addition, field test advisors observe both teachers and students during periods when the curriculum is in use. The combination of teachers' evaluations of the curriculum and their estimates of students' growth, and the external observations made by the field test advisor provide a good estimate of the extent to which the curriculum is meeting developer and consumer expectations.

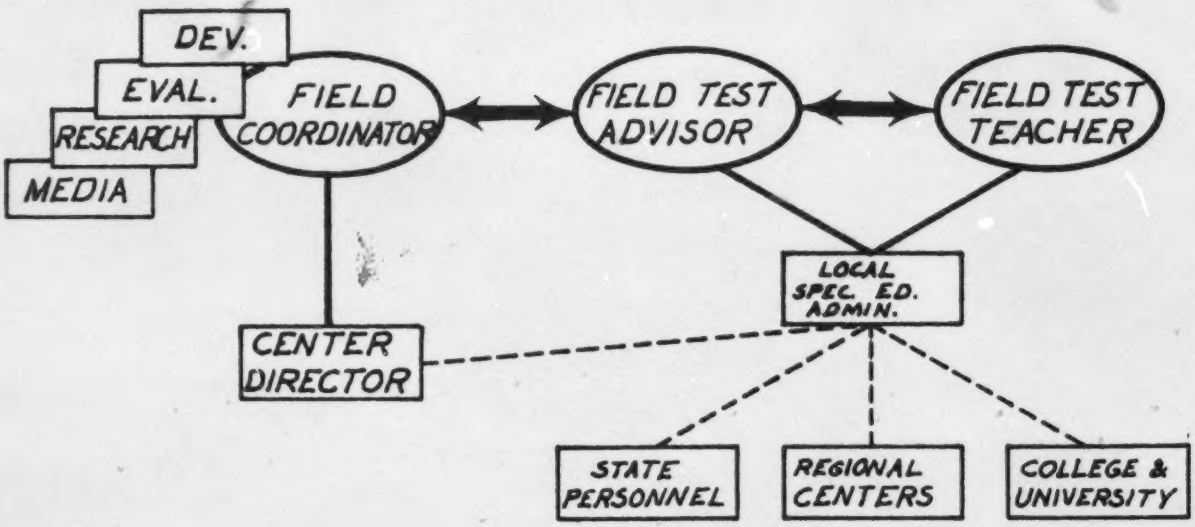
Communication Channels

The communication channels that were established offer insights into the use of human resources that are part of the field test network. Figure 1 illustrates both the channels through which Center-field communication is maintained and the relationships of professional personnel to one another in the field test network.

The primary links in the chain of communication and interaction are the field test teachers, the field test advisor and the Center-based field coordinator. The role of the field test teacher is the foundation for field test efforts since he is the major source of formative curriculum evaluations. The field test advisor is the keystone of the field test network: his is the responsibility for maintaining local activities at a high level of quality and the responsibility for linking local efforts of his group with those of the larger network. The field coordinator is primarily a facilitator. The major

Figure 1

FIELD TEST NETWORK COMMUNICATION CHANNELS



concerns of the field coordinator are the development and maintenance of durable and productive Center-field relationships. Thus, efforts are directed toward effective management of formal and informal communication within the network, management of efficient materials flow, and the maintenance of face-to-face contact with network participants on a regular basis.

There are some important limitations to using Figure 1 as more than a point of departure in discussing the network's human resources since the Figure oversimplifies the lines of interaction and communication that are an essential part of the field test process. The lines of communication between teachers in a single cluster, or between teachers from different clusters are not illustrated. Nor is the support

provided by state consultants, regional resource personnel and college and university personnel shown to have the impact that, in reality, it does have. While the same personnel may not have comparable impact from one site to another, the model was designed to encompass the many types of support personnel that can provide secondary channels of communication for field test purposes.

In Figure 1 an even more compelling lack is that no two-dimensional figure can capture the richness of the interaction that takes place. Thus, the Communication Channels should be viewed in the context of both explicit (formal) and implicit (informal) meanings. Said another way, no significant personnel who have the potential to support a field test effort should be excluded from any system of communication that is established to further its objectives.

Developing Operational Guidelines

Having identified the key personnel in the field to be involved, the final step in the procedural development phase is to codify procedural guidelines to assist field test advisors in their local coordination efforts. The Field Test Advisor Guidelines (Goldstein, M., 1970; revised 1971, 1974) provide an overview of the curriculum development program, with particular emphasis on field testing and the roles of key personnel involved in the field test network. In addition, information is given concerning the communication channels, the initiation of field testing, the management of materials, evaluation and data collection procedures and the maintenance and renewal of field test clusters.

To further assist the field test advisor, samples of all field test forms are included as an appendix to the guidelines.

The criteria for field test involvement are: (1) the designation of a field test advisor; (2) the maintenance of a site of between seven and fifteen teachers; and (3) the voluntary participation of teachers. Each criterion is discussed below.

Each prospective site was required to designate a local supervisor as liaison to the Center during the procedural development phase. In this way, prior to the establishment of formal commitments by either the school district or the Center, some estimate of the school district's interest and intent was determined. Too, it involved prospective field test advisors in local decision making concerned with field test involvement, thus limiting the need for "catch up" communication once all decisions had been made.

Each site was to be made up of between seven and fifteen special education teachers. This size range was found to be cost-effective from the Center's view and manageable for the field test advisor. Too, the size of the group was seen as an important factor in encouraging group participation to the extent that teachers would have opportunities to exchange ideas and to provide mutual support. Using groups, rather than individuals, had its origins in the need to maintain field test sites over long periods of time to assure a measure of program continuity for both teachers and students. Since there is a predictable yearly attrition in the teaching profession, it was reasonable to try to

involve sufficient numbers of teachers who would, themselves, effect a year-by-year program transition. Hence, veteran field test teachers orient newly recruited teachers to the field test program, thus using the multiplier principle of communicating information.

In special circumstances, the minimum number of teachers required for field test participation was waived. This occurred when the information that might be gathered would be unavailable otherwise. Too, setting minimums tended to discriminate against smaller school districts. To the extent that other criteria for involvement in field testing were met, the minimum number of teachers to be involved was negotiable.

For several reasons individual teachers were not considered for field test participation as the field test model evolved. First, they lacked the administrative support that had been found to be so necessary during the early years of field testing. Second, they lacked the opportunity to interact with other field test teachers and to both offer and receive assistance from them. Third, inclusion of individual teachers in long-term field test efforts was not cost effective.

Lastly, teacher voluntarism was considered an important criterion, since it was recognized that collaborative effort might not take place if involvement were based on administrative dictum. Too often teachers are not given opportunities to make professional decisions that directly affect their work. To the extent that the Curriculum Center was able to influence local school districts to move in the direction of voluntary participation, teacher voluntarism became a matter of field

test policy. Research confirms that when individuals participate in decision making concerning their work, they tend to be more motivated, more productive and more satisfied with the work in which they are engaged (Likert, 1967; Herzberg, 1966; Sergiovanni, 1967; Johansen, 1967; Langenbach, 1970, for example). Related to this policy was another that stated that teachers would not be paid for their evaluations of curriculum materials. It was felt that the professional quid pro quo of receiving curriculum materials in exchange for providing an evaluation of them would be sufficient to motivate a majority of teachers to participate in field testing. This view of intrinsic motivation being stronger than the extrinsic rewards of money is supported in the work of Herzberg (1966), among others.

To summarize, the procedures established to make field testing operational should combine sufficient structure to give form and consistency to the activities with enough flexibility to accommodate to unanticipated situations that might arise during the course of the field test. Too, the use of available research offers precedents and lends legitimacy to the procedures discussed above.

Field Test Initiation Phase

Given the parameters of the field test, as determined during the preceding phases, a formal search for specific field sites began. The field test initiation phase started by identifying leaders in the field who might be potential facilitators of the field test and concluded with participant orientation and training in the use of the curriculum materials.

Identification of Field Sites

With the Center's need for a field test population of diverse demographic character and the statewide organization of special education programs, it seemed logical to look to state departments of education to provide a common entry point into the state to gain access to prospective field test sites. The state special education consultant in mental retardation was found to be the common link through whom field test efforts might be initiated most efficiently within a state. The variation in the activities of state consultants from one state to another influenced the extent to which individual consultants took a more or less active role in identifying prospective sites for field test participation and in coordinating field test activities on a statewide basis once field testing had been initiated. At his best, the state consultant is a knowledgeable resource to both the field test sites within his state and to the curriculum development source.

While the majority of field test sites were identified through the efforts of state consultants, other dissemination channels were used as well. These included personal communication with special education leaders who were asked to suggest likely field test locations; and print communication, using the Center's newsletter, in which interested school districts were invited to contact the Center regarding possible field test involvement. Requests for inclusion in the field test were received from state, county and local sources. These requests were

considered according to the extent to which they met the criteria for field test participation discussed in the procedural development phase.

Orientation of Local Personnel

Following the identification of prospective sites, the next step in initiating field testing was to provide orientation sessions for groups of administrators and supervisors. These sessions were typically organized by state consultants and had two purposes: first, to inform colleagues of a curriculum innovation; and second, to recruit field test sites.

When the local special education leadership indicated that it was interested in establishing a field site, the newly-designated field test advisor arranged for the orientation of his teachers to the Social Learning Curriculum. Following the orientation session, teachers were invited to volunteer to participate in the program. Since orientation to any new activity can determine the extent to which individuals participate fully, knowledgeably, and successfully, attendance at the orientation was manditory for every teacher considered for field test participation. The initiation of field testing began at the point when teachers signed cards indicating a one-year commitment to field test.

It is important to consider the process of self-selection that occurred at every decision point between the time that a site signified interest in field testing and the time that field testing was actually begun. While self-selection might tend to bias samples, it

contributes in the long run to the receipt of better evaluations from teachers since the choice to participate was their own. Further, self-selection carries with it a greater prospect for mutuality of interest among the participants than is often found in programs where participation is mandatory. Finally, no attempt was made to have local leaders assess the professional competence of prospective field test teachers. Thus, while a measure of sample bias may exist, there is also wide variability among the teachers who volunteered to field test the Social Learning Curriculum: some were experienced and others were novices; some were considered to be highly competent, others moderately so and still others, of questionable competence. All who chose to participate were included at the initiation of field testing at a site.

After the successful completion of one year of field testing, local sites were given the responsibility to provide orientation to the curriculum for newly-recruited teachers. Local efforts were augmented with Center-developed materials: workshops designed to be offered by the field test advisor and veteran field test teachers; a filmstrip and audio-tape orientation package; and orientation booklets. Thus, the momentum gathered at a site during the first year permitted a smooth transition into the second year and beyond. In this way, over time, dependence on the Center is reduced as greater expertise at the local site is developed.

Field Test Maintenance and Renewal Phase

In the context of field testing, the maintenance and renewal of field test efforts are inseparable, both conceptually and practically.

"Maintenance" as it is used here refers to facilitating high-quality performance of all of the activities that occur once field testing is initiated. "Renewal" refers to the capacities of people and actions to change in response to changing needs and new situations. John Gardner has written of both aspects of behavior (1961; 1963) and has noted that maintaining high standards is not enough since it is possible that the capacity within an individual or an organization or a society to adapt to change may be lacking.

It was considered important, therefore, to incorporate both maintenance and renewal as parts of the field test model; and to portray them as simultaneous, rather than as sequential, phenomena. Further, by including renewal within the model, there is the inclusion of a cycle of planning and adaptation activities. Thus, the field test can be an ever-innovating force and need not be solely a maintainer of the status quo or a reactor to external changes. Implied here is that as the needs of the Curriculum Center change there will be a corresponding responsiveness to change at the field sites. Similarly, individual field sites have the power to influence the direction of change so that the field test remains congruent with local educational goals.

Maintenance Functions

As the first step in field test maintenance, it is necessary to operationalize the activities designed during the procedural development phase. Chiefly, these activities fall into three categories: materials support, communication and consultative support.

Materials Support

The materials support system includes the flow of curriculum materials to sites and the return of evaluation materials from the site. Since the field test network is extensive, it has been economical to send all materials directly to the field test advisor who, in turn, distributes them to field test teachers. After the curriculum is used and evaluated, the evaluation forms are returned by the teacher to the field test advisor. An advantage of this system is that since the field test advisor controls the flow of curriculum materials and forms to his teachers, he can maintain more accurate records. More important, however, he can be alerted to the needs of specific teachers as he reviews their evaluation forms prior to sending them to the Center. Practically, there is a savings in mailing costs by shipping and receiving materials in quantity. To keep the expense to the local school district to a minimum, self-addressed envelopes are provided to each field site.

Communication

A communication system cannot be established without first considering the personnel who will be the senders and receivers of messages. The primary communicators are the teachers, the field test advisor and the field coordinator (see Figure 1, page 17). Through the personnel who occupy these positions, information flows quickly from the individual(s) who has information to those who need it in order to function. Secondary communicators are those individuals at the local and state levels who, although not directly involved in the field test, need to be kept informed of its progress. Here, the flow of communication is essentially one-way,

most often initiated by the Center.

Regular communication is maintained between the Center's field coordinator and each site's field test advisor by means of monthly bulletins, telephone, mail, and periodic reports from the field test advisor concerning his site's progress with field testing. Communication also takes place between the field coordinator and field test teachers. Teachers are supplied with self-addressed postcards at the beginning of each school year and use them to communicate directly with the Center. The content of the messages sometimes deals with the teacher's comments on materials that are currently being field tested. Frequently, however, the messages are the sharing of an experience in which the teacher has observed a positive outcome of social learning by students. Of equal importance with the message is the fact that communication is taking place. It is vital that the professionals who are the foundation of a field test have the means and encouragement to communicate their ideas directly to the source from which they receive the materials that they use and evaluate. No postcard is ever left unanswered.

A large portion of the correspondence among the primary communicators is handwritten rather than typed. The reasons for this are simple: it saves time, it is more informal, and it keeps communication flowing at a more rapid rate.

The Center's newsletter, Centerline, contributes another dimension to the communication system. It permits news of the Center to be disseminated to the field at large including, of course, the field test network. Articles are written by teachers and field test advisors in addition

to the Curriculum Center's staff. Photographs of teachers using field test materials with their students provide on-site reality to support the printed word. The editorial policy of the newsletter favors the inclusion of as much news from field sites as possible, to give a measure of recognition to those who are involved in the field test.

Finally, the telephone is often used to communicate with field sites; to learn how the field test is progressing and to serve as the starting point in providing consultative support, typically to the field test advisor.

Consultative Support

The content of the communication is often directed toward supporting local field test efforts. However, before a program of consultation can be established, consideration must be given to the availability of manpower to provide support, the nature of the support to be provided, and the practical aspects of travel distances and costs. The types of consultation provided by the Curriculum Center were delimited by the field coordinator's being the primary (and often the only available) consultant and by the dispersed locations of field sites.

The types of assistance provided, after orientation, range from workshop presentation to troubleshooting on site at the request of the field test advisor to informal rap sessions with network participants. Regional and national meetings also provide opportunities for teachers, field test advisors and members of the Center's staff to work together to solve common problems. In addition, workshop formats are designed at the Center for

use by the field test advisor as part of his in-service training program. The nature of the consultation that is provided to field sites differs from one place to another, according to the tenure of the group in the field test and the needs of the field test teachers. Often, field test advisors offer guidance concerning the types of assistance that their teachers need.

While the materials su[illegible], communication and consultative support systems are being established and maintained by the field coordinator, local field sites are engaged in similar types of activities. At the start, the field test advisor is primarily concerned with the management of field test materials and the maintenance of communication among teachers and between teachers and the Center. As the field test advisor gains greater understanding of the Social Learning Curriculum and of the responsibilities associated with field test advisement, he takes on a substantive role in addition to his management role. He becomes sensitive to the quality of participation of each of his teachers and to their attitudes toward involvement in field testing. He provides encouragement and attempts to motivate those teachers who need it. His efforts become directed toward improving the quality of his teachers' field test participation by improving their teaching skills. Thus, in time, the field test advisor assumes a large part of the consultative role originally maintained by the field coordinator.

As stated earlier, field test teachers receive no payment for their field test participation. This is not to say that there are no external rewards. In most states where more than two field sites have been

established, arrangements have been made between local administrators and state consultants to award in-service credit to teachers which can be used either toward eventual pay increments or as credit for re-certification.

Local Assumption of Maintenance Functions

Continuation in field testing carries with it the responsibility for the field site to assume increased control of the maintenance of the field test from year to year and to collaborate with the Center to improve field test practices. Feedback is essential: feedback from the Center to field sites concerning the quality of participation of the site as a whole and of individuals who are part of the site; feedback from the field to the Center concerning the extent to which expectations have been met and any changes that should be considered to improve the current field test. In this way, decisions about the viability of continuing to field test are made jointly by the Center and the site with full knowledge of mutual expectations.

Renewal Functions

No matter how innovative the procedures for a field test may be, after a while they become routine; they are what is expected. In incorporating renewal into the field test model there was the conviction that improvement is always possible; not change for its own sake, improvement. The simplest changes to make are those that involve either the materials support system or communication. Both can be managed easily in the normal course of events and require relatively small amounts of

time or effort to achieve some result. Changes in the substantive area of providing consultative support require greater amounts of time and effort, and agreement among those who will be affected. Nonetheless, it is clear that renewal is a part of every maintenance function.

A recent Center renewal effort grew out of a need to strengthen field test participation at local sites. In collaboration with field test advisors, extensive modifications in field testing were proposed. These changes were mainly directed toward obtaining greater local commitment to teachers who were participating in the field test. For example, providing release time so that teachers might attend workshops and providing opportunities for field test classes to take field trips associated with the content of social learning lessons were essential elements of the changes in functioning that were proposed. The renewal effort began by canvassing all field sites to determine the extent to which they were dissatisfied with the status quo and to seek suggestions concerning promising areas on which to focus (Goldstein, M., 1975). Many respondents suggested that a written statement of the proposed changes in field testing would strengthen their own positions with respect to their local leadership. Thus, a planned change memorandum was constructed specifying the conditions of future field test participation. This aspect of the renewal effort extended over a six-month period.

Outcomes included a reduction in the size of the field test network, since some sites could not provide the necessary local support to warrant their continuation in the program and a corresponding increase in

the amount of time available for the field coordinator to support the field sites who chose to continue to participate in field testing.

Continuity of field sites and of the field test itself is based on establishing a balance between maintenance and renewal functions. The goal is to manage a field test that is adaptable to both internal and external change.

Summary

While the phases that comprise this field test model may be a useful guide for those considering similar types of activities, each specific field test must be considered within the context of its own purposes. The four phases that are at the core of the model, and their constituent parts, have been discussed in depth in the body of this paper. Here, they are summarized to offer a clear and systematic way to plan, initiate and operate a field test.

During the planning phase, attention must be given to three major classes of actions: (1) determining what the evaluation questions are that need to be answered and the most logical data-collection sources; (2) identifying the relevant population from which a field test sample might be drawn; and, (3) considering the practical factors of in situ field testing; specifically, anticipating all potential realities that might either facilitate or impede the conduct of the field test.

During the procedural development phase, consideration is given to determining the roles of the professionals who will be involved in the field test, both in terms of the roles that they maintain at their local sites and the roles that they will assume within a field test enterprise. This decision will most often be made in relation to the tasks to be accomplished through the field test. Thus, it is the task that determines the personnel to be involved in the field test, directly and indirectly. Once the tasks and personnel have been identified (in the abstract) it becomes necessary to develop systematic communication channels

through which information may flow readily, and with a minimum of distortion. Typically, this requires that the primary communication network be made up of those individuals who are directly involved in the field test. Once determinations have been made concerning the personnel to be involved, the tasks which they will perform and the communication systems designed to facilitate task attainment, it is necessary to codify procedural guidelines. In this way, the individuals involved in the field test will know how the organization with which they are working is organized to work with them.

As the emphasis moves from a theoretical to a practical level during the field test initiation phase, efforts are expended to search for and identify groups or individuals who appear to be most promising as participants in the field test. More often than not, identifying groups for participation is more difficult; however, the positive results of group participation suggest that it has long-term benefits by contrast with the search for individuals. Having identified prospective participants for the field test, the need to orient them to the scope, purposes and goals of the program, and to the role of the field testers as participants toward those ends, is apparent. Further, and perhaps most important at the introductory orientation sessions, the emphasis must be on the role of the participant and the scope of the task wnich he is expected to perform. By attending to the real-world interests of the practitioner first, the research and development organization can confirm that it has come out of the ivory tower.

Once the field test sample has been selected, activities are directed toward the maintenance and renewal of the field test sample. During this phase, all of the activities devised as part of the procedural development

phase are operationalized. In addition, attention is given to the specific types of consultative support that the organization is able to provide. Systematic efforts are directed toward continuous reevaluation of the field test: its effectiveness, the attitudes of the participants, and the procedures designed to facilitate the field test. All of these activities have as their raison d'etre the renewal and revitalization of all network participants. As part of the renewal cycle, there is movement back into the planning and procedural development phases, as needed. Thus, an open system is created that can continually maintain itself through the incorporation of new ideas and actions toward the process of establishing a balance between maintenance and change.

From the model, certain basic principles emerge as important in establishing field tests. Foremost, it is important to include all possible levels of decision makers in the planning and implementation of field testing. This is particularly true where commitments from leadership personnel are needed if practitioners are to function effectively. Too, indirect benefits can accrue from this practice. By involving professionals who indirectly affect the outcomes of the field test, there is an increased awareness and acceptance of the innovation. These local leaders may exert influence on their colleagues' decisions regarding the innovation, through practical experience gained with it during its field test stage. This may have consequences in reducing the lag time usually associated with the widespread adoption and diffusion of educational innovations, since the professionals have an identification with and an investment in the wider acceptance of an innovation with which they have been associated.

Providing visibility for teachers and supervisors who participate in field testing and offering rewards that enhance the professional's view of himself and his satisfaction with his role have value. In this regard, it bears repeating that monitary incentives were not used to induce participation. Prior research has shown their dubious worth as motivators; the present work confirms those findings.

There is substantial support for designating the special education supervisor as the individual most appropriately placed within the special education hierarchy to serve as a facilitator of change. The supervisor has a role that is in many ways analogous to that of the principal, who has often been cited in the general education literature as a primary change agent (Bockman, 1971, for example). This topic, however, requires further study.

Within the framework of designing a communication system, the minimum number of personnel to insure an effective field test should be involved. Too, quality and regularity of communication are essential to productive relationships, particularly when the activities are managed for the most part by long distance.

Finally, having a single individual within the research and development organization to coordinate the field test expedites activities and insures greater consistency over time. The "staff" for this individual are the link pin personnel (supervisors) who coordinate field testing at the local level.

The field test model can be applied wherever information is needed concerning a product or process, and where feedback is necessary.

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